

# RIDDELL'S NOTICE OF VEGETABLE PRODUCTIONS GROWING SPONTANEOUSLY IN WASHINGTON COUNTY, OHIO<sup>1</sup>

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Although Ohio has been explored and claimed by the Spanish, the French, and the British, with civilization having made inroads prior to the Revolutionary War, we have no record of any collection of plants by a trained botanist prior to 1832. During the summer of 1832, we have a record of the first collection to be made in Ohio by a professional botanist. This, strangely enough, is recorded in five issues of the *Western Republican and Marietta Advertiser*<sup>2</sup> for September 1, 8, 15, 22, and 29. The collection was made and the list prepared for the newspaper by John Leonard Riddell. It is interesting to note that the *Western Republican* was published and edited by John Brough who later became the Civil War Governor of Ohio, and that Riddell, for the same period, was Postmaster of New Orleans.

John Riddell had no formal schooling with the exception of this training with Amos Eaton, Senior Professor of the Rensselaer Institute. Eaton had written the *North American Botany*, which, at the time Riddell studied with him, had gone through its 5th Edition, for Eaton was the foremost Botany teacher of his day. Riddell, having received his Bachelor's Degree, decided to do some free lance teaching by giving lectures to any group which would pay him. His primary interest, however, was to teach in a Medical College, and this was probably his reason for going to Marietta. While he was in Pittsburgh, he heard of Dr. Hildreth's influence and interest in botany through the latter's brother-in-law. Riddell made a wise choice by going to Marietta as Hildreth had a wide acquaintance and influence throughout the State. Dr. Hildreth was instrumental in placing him at the Worthington Medical School and later at the Cincinnati Medical School. While he was at Cincinnati, Hildreth hired Riddell to help him on the State Geological Survey. To show his gratitude, Riddell invited Hildreth to come to Cincinnati to receive an honorary degree in medicine, which he, himself, was having a difficult time in acquiring. Because of floods, Hildreth was unable to accept this honor.

After a slight scandal in Wheeling, Riddell arrived in Marietta about the time when most of the spring flora had gone to seed or had died down. For nearly sixty years, the rich river bottoms had been under cultivation by the white man. An old diary mentions that a peach orchard was well established during the Revolutionary War. General Harmar, who was sent to the mouth of the Muskingum in 1785 to build a fort to protect the Indians from the white man's exploitations, writes that this vicinity had a population of three hundred and that all of the bottom lands were under cultivation. Squatters who came here had cleared two hundred acres north of what later became Marietta, and the early settlers who claimed this land were the only ones who had successful crops during the first year of their stay in Marietta. Thus, by 1832, Riddell very likely saw little virgin land, and there had been plenty of opportunity for introduced plants to become well established.

At Dr. Hildreth's suggestion, Riddell placed an advertisement in the *American Friends* to publicize the fact that he would collect plants for sale. Since Marietta

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<sup>2</sup>The author wishes to thank Mrs. Josephine Phillips for drawing his attention to the Riddell articles and the gift of the *Western Republican*, September 1, 1832.

did not offer an opportunity for a paid lecturer or trained botanist, he had to do something else in order to pay for his room and board of \$1.50 a week. He must have been more successful with the rival newspaper because he not only got his advertisement gratis for writing a description of the flora of Marietta, but in addition, the editor pointed out to the reader that the plants which Riddell was trying to sell were all excellently pressed. The following is the notation made by Mr. John Brough:

We call attention to the communication of Mr. Riddell, in this day's paper. We have seen several specimens of plants preserved by Mr. R. and must confess they exceeded in beauty and 'perfection of finish,' our utmost expectations.

Below is the article written by Riddell in the *Western Republican* for July 14, 1832. Note that the last paragraph is the same as that for which he had to pay in the rival newspaper.

#### SPONTANEOUS VEGETABLE PRODUCTIONS OF WASHINGTON COUNTY

It is said that very little has been done in this section of the country, to investigate the spontaneous vegetable productions. Here then, is an interesting region to examine. These fertile valleys, from time immemorial, may have been the unobserved residence of rare and valuable plants. Perhaps the hills yield some spontaneous vegetable, which when it shall have been improved by cultivation, will find its welcome way to our tables. I have proposed to engage in a few months in making botanical examinations; collecting and preserving at the same time, specimens of all the plants I shall meet with, not for myself only, but for others who may wish to possess them. I am the more anxious, from having made botanical collections in different parts of New York and Canada. As far as practicable, I intend to note the localities of different plants, the abundance or scarcity of timber trees and valuable herbs, the geological features of the country, and the various minerals that may present themselves, whether they are to be considered as sources of wealth, or mere matters of curiosity. The richness or sterility, the composition and variety of soil, being more intimately connected with the main subject of investigation, will receive proportionably more attention. Among the higher order of vegetables, such as shrubs and trees and flowering herbs, I am far from entertaining sanguine hopes that this enterprise will lead to the discovery of anything new. But the variegated lichens that hang from the branches of trees, the lowly mosses that fix their habitation on the barren rocks, and the pale fungi that abound in damp and shady places, have been less eagerly sought for. Every marsh and every ancient forest, have some of these strange vegetables almost peculiar to themselves; and it would indeed be unusual, if among the cryptogamous plants indigenous to this part of Ohio, there should be none except such as have been discovered and described in other regions.

That this investigation respecting the native growth of field and forest, if faithfully conducted and successfully completed, will be serviceable to the cause of science, must at least be obvious to her votaries. It will not only serve to determine the vegetable productions near Marietta, but like an almanac, will answer tolerably well for contiguous parts of the state. I trust it will also be obvious to an enlightened community, already noted for their successful efforts to promote the diffusion of useful knowledge, that such a measure, though novel in itself, is eminently calculated to improve and exalt the taste, and particularly to direct the attention of the younger members of community, from objects which are trifling and unimportant, to those which deserve their highest admiration.

My object in making dried collections for a number of Ladies and Gentlemen, is in the first place to defray expenses. Besides, I feel confident they will regard them as a useful acquisition to a library, an invaluable reference to the *wild flowers* that meet them in their walks, and a laudable source of amusement and gratification, whether nature reveals in her verdant forests and flowery lawns in summer, or leafless vegetation lies benumbed or lifeless beneath the chilling snow of winter. If painted representations are highly prized, from the faithfulness with which they record the general outline, the finer structure and the delicate coloring of plants and flowers; how much more valuable is the plant itself embalmed, still retaining (as in

most cases it does), its nicest form and fine refreshing hues; while for perfection or finish and delicacy of organic structure, it is infinitely above the most admired and successful effort of human art.

No books are more expensive than those containing plates of natural history. In America, very few large works of the kind has been published. According as they have sold in Europe, a work containing colored representation; of two hundred plants would cost more than \$100. Dr. Bigelow some years since published plates of sixty medical plants, the price of which was \$22.00. In the proposed collections the specimens will be neatly arranged in sheets of writing paper, and accompanied with their names, qualities, etc. at the following prices—\$4.50 for 100 species—\$6.50 for 150 species—\$8.75 for 200—\$10.75 for 250 species. Those wishing to have the plants put up in paper of a superior degree of fineness will incur an additional expense. Gentlemen living at a distance and wishing to become subscribers, will please enclose the money by mail.

J. J. RIDDELL, A. B. R. S.

Marietta, July 6, 1832.

The A. B. R. S. is interesting as it indicates that Riddell had his Bachelor's Degree from the Rensselaer School. He knew that he would need more than that to be able to get a position in one of Ohio's Medical Colleges, so he wrote to Eaton, and by September 1, he was able to write A. M. R. S. after his name when he published the results of his summer's work. We do not know how many subscribers Riddell obtained for his plants, but letters to Hildreth indicate that there probably were at least three—Dr. Hildreth, Dr. Cotton, local physicians, and a Mr. French, a teacher who later taught at Marietta College.

Riddell collected the rest of the summer, but in the meantime, he was writing to various Naturalists and Presidents of Medical Schools trying to find a position. In his journal for August 26, 1832, he writes:

I have received an answer from Morrow of the O.R.M.C., and from what he says I might lecture there . . . I have commenced writing my botanical report and it pleases me very much.

The report he speaks of is undoubtedly the list of plants which Blough published in the *Western Republican and Marietta Advertiser*. Four of these are reported here. The last issue was to appear in September 29th edition, but this has never been found by the author. These four articles contained descriptions of some 190 plants. The first two issues contained about 50 and the last two issues about 140. In the September 1 and 8 copies of the paper, he writes rather leisurely and describes his plants, giving their habitat and medicinal uses, and in one instance wonders about how the spital insect makes its froth. If the plant is not described in Eaton, he suggests it may be new, and in one instance, he gives an undetermined plant a local name, *Eupatorium muskingii* (see letter to Hildreth). Some of the plants he collected around Marietta may have been new varieties or species as we know that he, himself, in his *Western Synopsis of the Western Plants* describes several new species and that several plants were named for him. But beginning with the September 15 issue, he only mentions the plant by name, unless he finds it undescribed in Eaton, and even here his notes are too brief to know what this newly undescribed plant might be. The reason for his merely listing the plants is that he has been given the position as lecturer in chemistry at the Worthington Medical School.

A note in the *American Friend* for September 8, tells us that he stayed in Marietta until about the middle of September, and that he lectured to the Lyceum on electricity and not botany. His botanical report is printed below just as it appears in the newspapers. One will be interested to note the lack of errors made by the typesetter, so few in fact, that the author felt that it was unnecessary to correct them. To make the list of plants more useful to those unfamiliar with the nomenclature of Eaton, footnotes have been added. The botanical names used in the footnotes are those accepted by M. L. Fernald in his Eighth Edition of *Gray's Manual of Botany*.

## NOTICE OF THE VEGETABLE PRODUCTIONS

Growing spontaneously in Washington County, Ohio

To the Officers and Members of the Marietta Lyceum.

GENTLEMEN:—Though the notice which I have the honor of submitting to you, is considerably imperfect, yet I hope it will be found subservient to the objects for which you are associated. With feelings of personal obligation for the assistance you have rendered, in these pleasing and useful researches, I remain your obedient servant.

JOHN L. RIDDELL, A. M. R. S.

NOTE—The plants are arranged under the natural orders of Jussiere.

## Aroideae

*The natural order including the water arum, Indian turnip, etc.* The Indian turnip, (*arum triphyllum*)<sup>3</sup> is met with in the more elevated woods, though it is not very abundant. It has a smooth stem, frequently variegated with purple and green, dividing itself into two branches, each of which bears three large smooth leaves. The oddly shaped flower is so strangely mottled with purple and white, or purple and green, that it is easily recognized by all who ever saw it. The medicinal virtues of its turnip-shaped root, reside mostly in a spicy and acrid principle of a very evanescent nature.

The skunk-cabbage, (*ictodes foetidus*)<sup>4</sup> is said to grow upon the bottom lands along the Muskingum and Ohio rivers, but I have not seen it.

## Asparagi

*Tribes of asparagus, green brier, etc.* In the shaded recesses and rocky ravines of Mile Run, west of Point Harmar, I have observed the giant solomon seal, (*convallaria multiflora*),<sup>5</sup> rearing its arched stem, and exposing its alternate, dark green leaves, in a condition usually thrifty and fine. A species of solomon seal, (*convallaria racemosa*),<sup>6</sup> grows more abundantly in the same localities, which in some respects is quite remarkable. Its berries, borne in a loose cluster at the summit of the stem, are perfectly round, and possess the lustre of polished chalcedony. They are so variegated with differently shaped spots of reddish brown, upon a ground of light green, as to resemble the parti-colored eggs of birds. I have seen many of the same species on the St. Lawrence river, but this beautiful peculiarity I had never observed.

The green brier (*smilax rotundifolia*) is a beautiful climbing plant, bearing bunches of smooth round berries, in such a fashion as to make a perfect sphere; in the centre of which all the foot stalks from each particular berry, are united. I imagine those who are fond of ornamental shrubs and vines, have but to observe the graceful foliage and fine color of this species of green brier, to believe it deserving their attention. The only place where I have seen it growing, is in the ravine north of the great mound. Other species of smilax seem more generally diffused, and some quite abundant. The *S. quadrangularis*,<sup>7</sup> with its four sided stem and unfriendly prickles, may be frequently met with in most all situations. The *S. cincidifolia*,<sup>8</sup> which grows in the ravine referred to above, resembles it. West from Point Harmar, upon a hill which deserves to be noticed for the ferns it produces Dr. Hildreth and myself observed the *smilax walteri*,<sup>9</sup> each one of whose dark glossy leaves is transversed by three nerves.

## Alismaceae

*Waterplantain, and arrow leaf tribes.* In most damp places, and along the banks of small running brooks, may be seen that singular plant, the arrow head, (*sagittaria sagittifolia*),<sup>10</sup> the

<sup>3</sup>*Arisaema triphyllum* (L.) Shott.

<sup>4</sup>*Symplocarpus foetidus* (L.) Nutt.

<sup>5</sup>*Polygonatum biflorum* (Walt.) Ell.

<sup>6</sup>*Smilacina racemosa* (L.) Desf.

<sup>7</sup>*Smilax rotundifolia* (L.) Eaton's names and descriptions of this genus are very confusing; this accounts for Riddell's difficulties with the group.

<sup>8</sup>*Smilax cercidifolia*. This is a misprint. Riddell, however, likely had a variety of *S. Bona-nox* L. instead of Pursh's *S. cercidifolia*, 1814.

<sup>9</sup>*Smilax Walteri*—Pursh. Not reported for Ohio.

<sup>10</sup>*Sagittaria latifolia*. Willd.

leaves of which, growing up ten or twelve inches from the ground, precisely resemble in outline the head of an ancient arrow.

During low water, a species of pondweed (*potamogeton fluitans*),<sup>11</sup> may be seen growing from the bottom of the Muskingum river, its oblong and pointed leaves carelessly floating upon the bosom of the water, agitated by every wind and wake, yet securely retained by their long foot stalks, like a fleet of anchored vessels. The influence of situation on vegetables, is here finely exemplified. Before the leaves reach the surface of the water, they are long and grasslike, membranous and almost transparent; but when floating between the strata of water and air, they become smooth and opaque, and acquire an appearance as widely different as can be well imagined.

#### Lilaceae

*The lily and other tribes.* On hilly forest ground, shaded by the oboriginal beech and maple, you will see the pale and delicate bellwort, (*uvularia puberula*),<sup>12</sup> and on the steep sides of ravines, scarcely ever visited by the sun's rays, you will find two or three other species of bellwort (*uvularia perfoliata*, *U. sessilifolia*), which in their general appearance, resemble the solomon seal.<sup>13</sup>

#### Asphodeli

*The tribes of onion, asphodel, etc.* In a very few places, overgrown with copsewood and bramble, I have seen that valuable medicinal plant, the yellow star root, (*aletris aurea*).<sup>14</sup> Its finely shaped leaves, resembling in color and texture the young shoots of indian corn, proceed mostly from its bulbous root buried in the ground, while from their centre the flower bearing stem rises two or three feet in height. The root is said to be excellent for domestic cholera, bowel complaints, etc.

#### Orchideae

*The families of orchis, ladies slipper, etc.* I have observed several individuals of this strange but interesting race of vegetables, growing in the most secluded places, as if averse to the progress of cultivation and improvement. Perhaps none of our indigenous plants are more difficult to domesticate. In nearly all wild and unfrequented situations, from the shaking bogs of a marsh, to the sterile declivities of the sandy upland, species of the orchis tribe will occasionally flourish in all the eccentric luxuriance and splendour peculiar to themselves. The same species carefully reared under the skilful hand of the gardener, will dwindle away and become extinct. I have seen the giant orchis (*habenaria dilatata*),<sup>15</sup> in the marshy ravine, north of the great mound.

Those who visit the woody solitudes a few miles west of Point Harmar, will meet with the rattlesnake-leaf- (*goodvera pubescens*), spreading its curiously mottled foliage in the shades of the laurel and pine. This plant is said to be an excellent antidote to the bite of serpents, but it probably received its common name from the singular appearance of its leaves. They are of an oval, pointed form, and of a dark green colour; but so striped and checked into figures of all shapes, by wandering lines of white, as to resemble the skin of a serpent.

#### Hydrocharides

*Families of the mermaid and tape grass.* The tape grass—(*vallisneria spiralis*)—is<sup>16</sup> mostly seen growing in company with the pond-weed, in the waters of the Muskingum river. It may be known by its narrow grass-like leaves of a dirty green colour. This aquatic plant has attracted much attention, on the account of the singular economy of its flowers. (*Vide Paley's Natural Theology*)

<sup>11</sup>*P. nodosus*. Poir.

<sup>12</sup>This plant described by Michx. is not supposed to grow West of the Alleghenies, likely mistaken for *Uvularia grandiflora*. Smith.

<sup>13</sup>In a letter to Hildreth *Dioscorea villosa* L. should be added to Riddell's list of plants.

<sup>14</sup>*Chamaelirium luteum* (L.) Gray. In a letter to Hildreth, he asks him to change the above to *Veratrum luteum* and goes on to say Torrey identified it for him.

<sup>15</sup>*H. hyperborea* (L.) R. Br. var. *huronensis* (Nutt.) Farw.

<sup>16</sup>*Vallisneria americana*—Michx.

*Aristolochiae*

*The snake roots.* The Virginia snake root (*aristolochia serpentaria*),<sup>17</sup> grows plentifully in the pawpaw thickets along the banks of the Muskingum and Ohio. This celebrated medicinal plant may be known by its climbing stem, and large heart form leaves.

In elevated woodlands, and fields more recently reclaimed from the wilderness, may be seen the remform leaves of the wild ginger, (*asarum canadense*), known also to many as the white snake-root. A tincture of this root in dilute spirit, makes a pleasant bitter, possessing very active tonic qualities.

*Lauri*

*The family including the camphor tree, the sassafras, and spice bush.* The sassafras tree, (*laurus sassafras*),<sup>18</sup> which is met with almost every where, is covered when young with a rich green bark, peculiarly beautiful. The bark and roots possess a pleasant flavor, and exhale an agreeable and peculiar odour, occasioned by a volatile oil, which is extracted for medical purposes. This oil, as well as rape seed oil, naptha, and sulphuric ether, is a solvent for India rubber.

The most remarkable peculiarity of the sassafras tree is the strange anomaly of its leaves. The same tree, and even the same branch bears a variety of leaves shaped entirely different. Some will be long, some will be nearly round, some will be forked, and some eared like the leaves of sorrel; while others with an admirable symmetry, will be divided into three equal lobes.

The spice bush (*laurus benzoin*),<sup>19</sup> becomes here a shrub some ten or fifteen feet in height, growing in dry and hilly situations. The same shrub in New York and Upper Canada, always inhabits miry swamps, and seldom attains to the height of a man. Its leaves and bark are remarkably smooth, and its branches delicate and brittle. The twigs and bark have a peculiar spicy flavour, and upon carefully heating them over a stove, the crystalline benzoic acid will rise as an odoriferous mist, and may be collected in cones of writing paper, in long splendid crystals.

*Polygonae*

*Families of the rhubarb and dock.* There are many vegetables that seem fond of the society of man, though they minister neither to his comfort nor necessities. They form their harmless colonies about his habitation, and when decay has crumbled it to the dust, they still point out the spot where it stood.

Among the self domesticated vegetables, may be reckoned several species of the *polygonum*. The knot grass, (*polygonum aviculare*), has a delicate knotted stem scarcely able to support itself. From alternate sides of the stem, proceed handsome light green leaves, terminating in a point, though their general form is oval. The tall knot grass, (*polygonum erectum*), very much resembles it. The latter, however, grows erect, and is much larger. The smart weed, (*polygonum barbatum*),<sup>20</sup> forms itself into little communities, and fixes its residence by the wayside and in neglected fields.

The ladies thumb, *polygonum persicaria*, resembles the smart weed in habit and appearance, but may be distinguished from it by a heart shaped spot of dark green on each leaf. There are two species of this family which grow near the water's edge, on the Muskingum river. They both have pale leaves and knotted stems. The larger species is called the mud knot weed; (*polygonum amphibium*),<sup>21</sup> the smaller, which may be distinguished by its narrow hairy leaves, has received the name of hairy knot weed, (*polygonum hirsutum*).<sup>22</sup>

The bread grass, (*polygonum sagittatum*), with its arrow form leaves and reversed prickles, abounds in damp places, its climbing stem easily supporting itself, among the bullrushes & ferns.

<sup>17</sup>Later by correspondence changed to *Polygonum scandens* L. (*Aristolochiae* is the beginning of the September 8, 1832, list of plants.)

<sup>18</sup>*Sassafras albidum* (Nutt.) Nees.

<sup>19</sup>*Lindera benzoin* (L.) Blume.

<sup>20</sup>*Polygonum lapathifolium* L.

<sup>21</sup>var. *stipulaceum* (Coleman) Fern.

<sup>22</sup>Since this is a southern species, Riddell confused it with some other *Polygonum*.

The climbing buckwheat, *polygonum scandens*, whose leaves resemble those of the Virginia snakeroot, delights to grow on the borders of cornfields, and in the thickets of the pawpaw and elder. The halbert knot weed (*polygonum arifolium*),<sup>23</sup> is very rare.

The common field sorrel, (*rumex acetosella*), grows here in many situations, but the soil does not produce it very liberally. The peculiar acid taste of this plant depends upon a saline substance, whose basis is derived from the earth in which it grows. According to Bezrelius and others, this salt or sorrell is the potassic bi-oxilate; or caustic potash neutralized by the poisonous oxalic acid; notwithstanding, the leaves of sorrell are healthy and pleasant to the taste, and children are very fond of them.

In the course of my rambles I have observed three species of dock, (*rumex crispus*, *rumex obtusifolius*, *rumex acutus*),<sup>24</sup> another vegetable which relies upon the toleration of the husbandman and his herds, and quietly fixes itself in the most frequented fields.

#### *Atriplices*

*The natural order including the beet, the blite, and the samphire.* The pokeweed (*phytolacca decandris*),<sup>25</sup> grows in this part of Ohio in unparalleled abundance, and sometimes to a gigantic size. It is not unfrequent to see a thrifty poke towering above the neighbouring weeds and attaining the height of eight or ten feet. When the pokeweed is in flower, its appearance is not very interesting; the whole plant, the stem and flowers not excepted, partaking of a monotonous green color. Not so when the autumnal sun has elaborated and transformed the juices and matured the fruit. The stem then becomes a dark purple, the leaves as they are seized by incipient decay, acquire rich tints of crimson, varying into green, while the beautiful clusters of dark shining berries, may in appearance vie with any which the wilds produce. The juice of these berries, as well as an infusion of the membranous bark, makes a fine red dye. Unfortunately it is extremely fugacious, perhaps as little permanent as any we are acquainted with. In its medicinal capacity, the phytolacca acts both as an emetic and cathartic.

On the banks of the rivers and creeks, you will frequently meet with miniature forests of the Jerusalem oak, (*chenopodium botrys*). This plant attains to the height of ten or twelve inches, and from the arrangement of its branches and herbage, it bears a striking resemblance to a full grown oak. It awakens feelings and reflections of a peculiar cast, to wend one's way through a wilderness of the Jerusalem oak, and looking attentively down, to contemplate the aspiring forest trees so far below.

The common pigweed, (*chenopodium album*), manifests a great partiality for neglected gardens. It grows rapidly, and wilts almost instantaneously, if it be severed from its roots; both of which facts seem to show that the juice circulates with unusual rapidity.

#### *Plantagines*

*The Plantain.* Of the humble but useful plantain, there are thirteen species growing in the United States. The smooth leaved plantain, (*plantago glabra*),<sup>26</sup> is the one which so plentifully abounds here. Its virtues are so well understood and appreciated, by the good housewife, as to preclude the necessity of dwelling upon them.

#### *Lysimachiae*

*The loose strife, chick wintergreen, etc.* The loose strife, (*lysimachia ciliata*), is a very regular herbaceous plant, with a profusion of bright yellow flowers; inhabiting the banks of rivers; & the low fertile meadows; and attaining the height of twenty or thirty inches. The footstalks of its leaves, are margined with straight hairs, resembling the eyelashes; and this circumstance distinguishes it from other species which nearly resemble it.

The chick wintergreen, (*trientalis americana*),<sup>27</sup> delights to grow in the most shaded parts of the primitive forests. In such situations, you will see its gay tuft of leaves, spreading out

<sup>23</sup>Likely the var. *pubescens* (Keller) Fern.

<sup>24</sup>*R. conglomeratus* Murray.

<sup>25</sup>*P. americana* L.

<sup>26</sup>Since *P. eriopoda* Torr. not reported for Ohio, Riddell's plant was likely *P. major* L.

<sup>27</sup>*Trientalis borealis* Raf. (*Lysimachiae* is the beginning of the September 15 list.)

laterally from a stem a few inches in height, & decked perhaps with two or three delicate white flowers. Upon a hasty glance, one would suppose it were the red cherry tree, in an infant state; but observation would soon point out a dissimilarity. The only parts of the globe, where the chick wintergreen is known to grow, are Siberia and North America.

#### *Pediculares*

*The lousewort, speedwell, etc.* The barren snakeroot (*polygala ambigua*), may be found upon those arid hills, whose ferruginous soil has been formed from disintegrated rocks. This plant is so very small and delicate, as almost to escape observation. It may be known by its numerous branches, thickly crowded with pale green flowers.

Of the speedwells, I have observed only a small species, with smooth oval leaves, (*veronica serpyllifolia*). It inhabits very damp places. There is a family of herbs, which have received the name of lousewort from the fancied resemblance which their leaves bear, to the general outline of a louse. There is one species growing on the hills (*pedicularis lapponica*),<sup>28</sup> and one, among the brakes and sedges of the marshy ravine, near the giant mound, (*pedicularis pallida*).<sup>29</sup> Around the joints of the latter species, a frothy mucilage may sometimes be observed & occasionally a few other vegetable tenants of that ravine exhibit the same appearance. Upon examination, a small green worm may always be found, enveloped in the froth; but whether the liquid is secreted by the plant or the worm, or whether it is blown into bubbles by the wounded air cells of the one, or the singular ingenuity of the other, is questionable.

A tall plant known by the name of Culver's physic (*leptandria virginica*),<sup>30</sup> grows plentifully in the thickets of secondary growth, and not unfrequently in situations more exposed. At intervals of four or five inches, its straight and hollow stem is surrounded by five or six diverging leaves; and at the summit, the aggregated white flowers resemble a military plume. It is esteemed by some practioners, and excellent cathartic.

#### *Acanthi*

The water willow (*justicia pedunculosa*),<sup>31</sup> grows at intervals along the shores of the Musingum river, taking root on the steep declivities, left dry by the subsidence of the vernal floods. This herbaceous plant, has numerous tufts of cheerful red flowers, elevated on slender stems, which are nearly equal in length, to its willow-like leaves. The water willow seldom exceeds two feet in height. It acts medicinally as an emollient.

#### *Jesmineae*

The white ash, (*fraxinus accuminata*), is<sup>32</sup> occasionally met with in the forests, though it must be considered scarce. As a forest tree it is remarkably erect and graceful, carrying its principal stem much higher than the oak or the elm, and contributing by its agreeable foliage and light gray bark, to variegate and enliven the woodland scenery. Gilpin, in his work on the Forest scenery, says a writer on timber trees, calls the oak the Hercules of the forest, and the ash the Venus; the chief characteristic of the one being strength, of the other elegance. "The ash, however, drops its leaves very early; and, instead of contributing its tint to the many coloured foliage of the autumnal woods, it presents wide blanks of desolate boughs." The ash has been called "the Husbandman's tree, nothing being equal to it for agricultural implements, & for all sorts of poles, ladders, lughandles and other purposes which require strength & elasticity combined with comparative lightness." The prim, (*ligustrum vulgare*), has probably been introduced.

#### *Vitices*

*The Vervains.* The nettle-leaved vervain (*verbena urticifolia*), may be found on the borders of forests, in pastures, and on the commons in great plenty. It is a slender weed, growing three

<sup>28</sup>Likely mistaken for *P. canadensis* L.

<sup>29</sup>*P. lanceolata* Michx.

<sup>30</sup>*Veronicastrum virginicum* (L.) Farw.

<sup>31</sup>*Justicia americana* (L.) Vahl.

<sup>32</sup>*Fraxinus americana* L.



or four feet high, with a four sided hairy stem, which is very much branched, and crowded with a profusion of small flowers that are pale and homely. Its leaves resemble those of the nettle, whence its name.

The blue vervain, or simpler's joy (*verbena hastata*), though it is closely and obviously allied to the preceding, is a much more graceful plant. I have seen it only upon the island near Marietta, and even there, it is met with so rarely, that it can hardly be considered as a native of the soil. It is an abundant product of more northern climates; and probably its seed has been transported by the floods from the elevated sources of the Allegheny. It may be known by its handsome serrate leaves, and clustered spikes of dark purple flowers. The vervains were considered by Parkinson, and the older authors, as efficient antidotes to the poison of serpents.

#### *Labiatae*

*The mints and thymes.* This natural order includes a great variety of interesting and useful herbs, which grow in all situations, and endure all climates: loading the air with their perfumes, and enlivening the desert place with their presence. They furnish the prudent mother with the most simple and valuable remedies & if you enter the abode of the industrious tenant, or the more comfortable mansion of the farmer, you will commonly see dried bundles of these herbs, plentifully suspended from the walls. Physicians in ancient times seem to have drawn a large portion of their *materia medica* from plants of this order. Speaking of them, in reference to their medicinal qualities, a late writer on botany, observes that "they are very active scernant stimulants, and among them, are all the most valuable sudorifics. The sweet scented are warming stomachics, and the bitter ones are tonics."

The water horehound, (*lycopus europaeus*),<sup>33</sup> grows on the banks of rivers & creeks and bears some resemblance to the northern mint. It differs, in having jagged leaves, and sessile rings of flowers that are much more minute.

The *lycopus virginicus*, growing on Duck Creek resembles the preceding. I have observed a species of *lycopus* upon the Muskingum river, which does not seem to be described in any *flora* which I have examined. I have avelled it in my collection, the *lycopus serratus*.<sup>34</sup> The leaves are notched upon their margins, and not lobed; and they seem much inclined to exchange their green for a hue of reddish brown.

Some of the mountain mints, all tall and extremely beautiful, appearing in all the intermediate tints between the deepest crimson, and the fairest white. The fragrance which they exhale is grateful & diffuse itself to a distance around. They are sometimes called the wild balm; and as they grow in almost every thicket, they are unquestionably well-known. They can be distinguished by a bunch of long, curved flowers, that are usually seated upon the summit of the stem. I have seen five species, (*monarda didyma* var. *angustifolia*,<sup>35</sup> *monarda clinopodia*, *fistulosa*, *monarda hirsuta*,<sup>36</sup> *monarda rugosa*).<sup>37</sup>

The wild germander (*teucrium canadense*), forms social collections in fields of bramble, displaying bright red flowers and broad leaves, and liberally wasting an agreeable perfume. It grows two feet high.

The wild basil, (*pycnanthemum incanum*),<sup>38</sup> is still more prodigal with its fragrance. Its branching stems grow tall and slender, and have a rather gay and airy appearance. The wild basil may be known by the remarkable paleness of its younger leaves, which would lead one to suppose they were blighted or sprinkled with meal.

REMARK—The general reader will find nothing perhaps to interest him in the list of vegetable productions, which is here subjoined. The writer intended to continue the notice, after the manner of the preceding numbers; and this resolution would still be regarded, were he not about to leave Marietta.

The generic and specific names are those adopted in the fifth Edition of *Eaton's Manual of Botany*.

<sup>33</sup>*L. americanus* is probably the species, instead of *L. europaeus*, which is not reported for Ohio.

<sup>34</sup>In correspondence with Hildreth, he changes his specimen to *L. virginicus* L.

<sup>35</sup>*Monarda didyma* L.

<sup>36</sup>*Blephilia hirsuta* (Pursh) Benth.

<sup>37</sup>Likely *M. clinopodia* L.

<sup>38</sup>*Pycnanthemum pycnanthemoides* (Leavenw) Fern.

*Mints and Thymes.* *Nepeta Cataria*, cat-mint. Habitual, Fields. *Hyssopus nepetoides*,<sup>39</sup> Giant hyssop. Hab-Woods. 5 feet high. *Mentha borealis*,<sup>40</sup> Northern mint. River banks. *M. Viridis*,<sup>41</sup> Spearmint. River banks. *M. piperita*, Pepper-mint. *Leonurus cardiaca*, Motherwort. *Marrubium vulgare*, Horehound. Plenty. *Cunila mariana*,<sup>42</sup> Dittany. Hills. *Hedeoma pulegioides*, Pennyroyal. Very abundant—Fields. *Glechoma hederacea*, Ground ivy—meadows, and *Scutellaria lateriflora*, Mad-dog-scall-cap—Low lands. *S. serrata* in thickets, and among briers. *Clinopodium vulgare*.<sup>43</sup> Field thyme—Emerson's ravine. *Prunella vulgaris*, Heal-all. Fields.

#### *Scrophularia*

*The monkey-flower, fox-glove, etc.* *Dracocephalum virginianum*,<sup>44</sup> Dragon's head—Duck Creek. *D. cordatum*,<sup>45</sup> Mile Run. *Scrophularia marilandica*, Figwort—Plenty—7 feet high. *Antirrhinum linaria*,<sup>46</sup> Toad flax—Elevated Square. *Gerardia flava*, False fox glove—Woods. *G. Pedicularia* Woods. *G. glauca*,<sup>47</sup> (perhaps new). *Gerardia*, (undescribed?)<sup>48</sup>—Woods. *Mimulus ringens*, Monkey-flower—Muskingum banks—Rare. *M. alatus*—Plenty; damp places; 18 inches high.

#### *Solaneae*

*Potato, Deadly night-shade, etc.* *Daturum stramonium* var. *purpureum*. Thorn apple—Very abundant. 2 to 3 feet high. *Verbascum thapsus*, Mullein—tolerably plenty. *V. blattaria*, Moth mullein—2 feet. *Solanum nigrum*, Deadly nightshade—abundant every where. *Physalis viscosa*,<sup>49</sup> Yellow henbane.

#### *Boraginæ*

*Cynoglossum pilosum*,<sup>50</sup> Hairy hound-tongue—River banks; 3 feet high.

#### *Convolvuli*

*Morning glory, and so forth.* *Convolvulus repens*,<sup>51</sup> Field bindweed—Cornfields. *C. arvensis*—Cultivated lands. *Cuscuta americana*,<sup>52</sup> dodder—Plenty. (Stem twining, yellow and leafless.)

#### *Bignoniæ*

*Catalpas tree, snake-head, etc.* *Bignonia radicans*,<sup>53</sup> Trumpet flower. *Chelone glabra*, Snake-head—marshy ravine.

#### *Polemonia*

*The polemonium, lichnidia, etc.* *Phlox paniculata*, Lichnidia—Island in the Ohio river. *P. maculata*, Spotted stem. Lichnidia—Marshy ravine.

#### *Apocynæ*

*Apocynum androsaemifolium*, Dog bane, Wandering milkweed—among briers. *A. hyper-*

<sup>39</sup>*Agastache nepetoides* (L.) Ktze. (*Labiatae* is the beginning of the September 22 list.)

<sup>40</sup>*M. arvensis* var. *villosa* (Benth.) S. R. Stewart.

<sup>41</sup>*Mentha spicata* L.

<sup>42</sup>*Cunila origanoides* (L.) Britt.

<sup>43</sup>*Satureja vulgaris* (L.) Fritsch.

<sup>44</sup>*Physostegia virginiana* (L.) Benth.

<sup>45</sup>*Meehanian cordata* Brit.

<sup>46</sup>*Linaria canadensis* (L.) Dumont.—evidently *L. vulgaris* had not been introduced as yet.

<sup>47-48</sup>Probably one of the undescribed varieties of *G. flava* or *G. pedicularia* (L.) Farw.

<sup>49</sup>*Physalis heterophylla* Nees.

<sup>50</sup>In correspondence to Hildreth, Riddell calls this *Rochelia virginiana*. *Lappula texana* (Sch.) Brit. More likely to be *C. virginianum* L.

<sup>51</sup>*C. sepium* var. *repens* (L.) Gray.

<sup>52</sup>*C. Polygonorum* Engelm.

<sup>53</sup>*Campsis radicans* (L.) Seeman.

*icifolium*,<sup>54</sup>—River banks. *Asclepias syriaca*, Common milkweed (Silgrass). *A. incarnata*, Purple milkweed. *A. nivalis*,<sup>55</sup> *A. tuberosa*, Butterfly weed—in meadows.

#### *Gentiana*

*Sabatia angularis*, American century—1 foot high; lands recently cleared.

#### *Rhododendra*

*Kalmia latifolia*, Laurel—1 mile west from Point Harmar. *Diospyros virginiana*, Persimmon.

#### *Ericae*

*Pyrola dentata*<sup>56</sup>—Open woods. *Chimaphila maculata*, Spotted wintergreen—Laurel hill; Pine woods. *Vaccinium corymbosum*, Giant whortle berry—Laurel hill. *V. virgatum*,<sup>57</sup>—Ravine. *Andromeda arborea*,<sup>58</sup>—Sorril tree, 20 feet high—Plenty. *Monotropa uniflora*, Indian pipe—Woods; 6 inches high; whole plant white.

#### *Campanulaceae*

*Lobelia inflata*—Indian tobacco—Plenty in fields and forests. *L. kalmii*<sup>59</sup>—Ravine. *L. siphilitica*—Woods; Plenty. *L. cardinalis*, Cardinal flower—seems rare. *L. fulgens*<sup>60</sup>—Woods and rank thickets; 3 feet; slender.

#### *Cichoraceae*

*Leontodon taraxacum*.<sup>61</sup> Dandelion. *Prenanthes virgata*,<sup>62</sup> Wild lettuce. *Sonchus oleraceus*.<sup>63</sup> Gall of the earth. 4 feet high.

#### *Cinarocephalae*

*Liatris grammifolia*,<sup>64</sup> a beautiful flowering bulbous plant. 3 feet high; rare on sandy hills. *Cnicus lanceolatus*,<sup>65</sup> Common thistle, not plenty. *C. altissimus*, Fall thistle; 10 or 12 feet. *Arctium lappa*, Burdock; probably introduced.

#### *Corymbiferae*

*Bidens frondosa*, Burr-marygold; not abundant. *B. bipinnata*, Hemlock beggar-ticks; plenty on new land. *Kuhnia eupatorioides*,<sup>66</sup> False boneset. *Eupatorium perfoliatum*, Boneset; thoroughwort: abundant. *E. sessifolium*, Dry forests; 3 feet. *E. purpureum*, Joe-pye; plenty; 8 feet. *E. muskingi*,<sup>67</sup> Ironweed (not described in Eaton?) *Cacalia suaveolens*; 4 feet high; Island and river bank. *C. radiata*,<sup>68</sup> (non-descript?) 5 or 6 feet high; sandy soil; Emerson's ravine. *Gnaphalium americanum*,<sup>69</sup> Life everlasting; 12 inches, woods and open places. G.

<sup>54</sup>*A. sibiricum* Jacq.

<sup>55</sup>In correspondence with Lee Walp, August 10, 1950, Dr. M. L. Fernald suggests that Riddell's plant was *A. perennis* or *A. quadrafolia* rather than *A. nivalis*.

<sup>56</sup>Hildreth correspondence, leaves of *Erigeron* and capsule of *Pedicularis*. (sic.)

<sup>57</sup>*V. vacillans* Kalm.

<sup>58</sup>*Oxydendrum arboreum* (L.) D.C.

<sup>59</sup>Hildreth correspondence changed to *L. claytonia* which now is *L. spicata* L.

<sup>60</sup>Hildreth correspondence changed to *Campanula americana* L.

<sup>61</sup>*Taraxacum officinale* Weber.

<sup>62</sup>*P. autumnalis* Walt.

<sup>63</sup>*Lactuca floridana* (L.) Gaertn.

<sup>64</sup>*L. cylindracea* Michx.

<sup>65</sup>*Cirsium vulgare* (Savi) Tenore.

<sup>66</sup>Later changed to *E. ageratioides*. Now known as *E. rugosum* Howtt.

<sup>67</sup>Changed to *Veronia praealta*, which should have been *V. noveboracensis* L. 1753.

<sup>68</sup>Hildreth correspondence changed to *C. reniformis*, which in turn was likely *C. Muhlenbergii* (Sch. Bip.) Fern.

<sup>69</sup>*G. purpureum* L.

*polycophalum*, Sweet balsam;<sup>70</sup> 2 feet, pastures. *Chrysanthemum leucanthemum*,<sup>71</sup> Oseyed daisy; abundant in meadows. *Inula helenium*, Elecampane. *Erigeron canadense*, Flea bane. *Solidago stricta*, golden rod. *S. latifolia*,<sup>72</sup> *S. virgata*,<sup>73</sup> *Aster aestivus*,<sup>74</sup> Star flower. *A. solidaginoides*,<sup>75</sup> *A. macrophyllus*. *A. prenanthoides*. *Anthemis cotula*,<sup>76</sup> May weed; very common. *Achillea millefolium*, Yarrow. *Rudbeckia aristata*. Cone flower, 2 feet dry places. *R. digitata*<sup>77</sup>—8 feet, low situations. *Helianthus mollis*. Wild Sunflower. *H. altissimus*,<sup>78</sup> *H. longifolius*. *H. sparsifolius*,<sup>79</sup> *H. truncatus*,<sup>80</sup> *H. rigidus* (nondescript?)<sup>81</sup> *Coreopsis tripteris*, Tickseed-sunflower, 6 feet high. *Actinomeris squarrosa*,<sup>82</sup> feet, Plenty.

#### Dipsaceae

*Cephalanthus occidentalis*, Button bush; marshes.

#### Caprifolia

*Viburnum dentatum*. Arrow wood; under shrub, 6 feet high. *V. molle*; Woods; rare—*Sambucus canadensis*, Sweet elder; plenty. *S. pubescens*, red berried elder; more scarce—*Cornus florida*, Dogwood; in forests very abundant. *C. asperifolia*,<sup>83</sup> not plenty. *Triosteum perfoliatum*, Horse ginseng; occasionally met with.

#### Rubiaceae

*Galium micranthum*, Bed straw, a delicate vine. *G. tinctorium*, Dyer's cleaver. *G. circoezans*, Wild licorice. *G. aparine*; *G. pilosum*; *Houstonia caerulea*, Venus' pride; seems rare. *H. purpurea*; more plenty.

#### Araliae

*Panax quinquefolia*, Ginseng; tolerably plenty. *Aralia racemosa*, Spikenard; plenty. *A. nudicaulis*, Duck Creek, *A. spinosa*, Agelica tree; 15 feet high.

#### Umbelliferae

*Cicuta maculata*, Glaucous Hemlock deadly poison; Emerson's ravine. *Uraspermum claytoni*,<sup>84</sup> Sweet cicely Woods; rare.

#### Ranunculaceae

*Actea rubra*,<sup>85</sup> Baneberry; 6 feet; plenty. *Macrotys racemosa*,<sup>86</sup> Cohosh; Woods, rare; resembles the preceding. *Podophyllum peltatum*, May apple, *Aquilegia canadensis*, Wild columbine, *Hydrastis canadensis*, Orange root. *Clematis virginica*, Virgin's bower, *Caulophyllum thalictroides*, Poppose root; woods. *Thalictrum dioicum*, Meadow rue. *C. corynellum*,<sup>87</sup> *C.*

<sup>70</sup>*Gnaphalium obtusifolium* L.

<sup>71</sup>Probably the variety *pinnatifidum* Lecoq & Lamotte.

<sup>72</sup>*Solidago flexicaulis* L.

<sup>73</sup>*Solidago stricta* Ait.

<sup>74</sup>This could be any of the narrow leaf asters common to Ohio.

<sup>75</sup>*A. linifolius* (L.) B.S.P.

<sup>76</sup>*R. triloba* L.

<sup>77</sup>*R. laciniata* L.

<sup>78</sup>Probably *H. giganteus* L.

<sup>79</sup>*H. atrorubens* L.

<sup>80</sup>*H. divaricatus* L.

<sup>81</sup>Rare in E.U.S. (?) Likely a name used by Riddell for a *Helianthus* that he was unfamiliar with.

<sup>82</sup>*Actinomeris alternifolia* (L.) D.C.

<sup>83</sup>*C. Drummondii* Meyer.

<sup>84</sup>*Osmorhiza Claytoni* (Michx.) Clarke.

<sup>85</sup>*Cimicifuga racemosa* (L.) Nutt.

<sup>86</sup>*A. pachypoda* Ell. 85–86 are interchangeable.

*purpurascens*.<sup>88</sup> *C. carolinianum*,<sup>89</sup> *Anemone virginiana*, Wind flower; 2 feet *Hepatica americana* var. *acutiloba*,<sup>90</sup> Liver leaf; woods, *Ranunculus recurvatus* Woodland crow foot;—Woods, Renivalis

The September 22 newspaper concludes with the following editorial note:

Note: The scarcity of periods and commas, must account for the erroneous punctuation. and to be concluded in the next issue.

The last portion of Riddell's report undoubtedly contained the *Roseaceae*, *Leguminosae*, *Cruciferae*, *Hypericaceae* and *Caryophyllaceae*, etc. From these families, it would have been possible for him to have collected the 250 plants that he set out to sell to his clients.

The following two letters from Worthington, Ohio, written by Riddell to Hildreth help to complete his report. The following few lines are taken from the first letter dated October 24, 1832.

I have been paying some attention to my herbarium and I find that haste, imperfect specimens, and too much reliance on memory, had favoured the introduction of some errors. Please change the name *Macrotys racemosa* to *Actaea alba*, *Actaea rubra* to *Macrotys racemosa*, *Aster aestivalis* to *Erigeron*. Among the nameless plants which I left you, there is a brier I learned *Labiata* plant, growing in the woods called rich-weed, horse-balm, etc. It is a collinronid. The one with triangular capsules, and cordate leaves, which Peter took to be a *Menispermum*, is a *Dioscorea*.

The second letter dated September 5, 1833, is quoted in part and contains Torrey's corrections for the plants Riddell collected in Marietta.

As yet, I find much to interest me in the Prairies on every side. I sent to Torrey my doubtful plants up to May last, and have just received a letter from him, so that I am now able to correct some errors, in the herbarium which you have. Change *Nyptis eradiata* to *Collinsia verna*, *Anemone onlentangiensis* to *Enemion biternatum* Raf. (not mentioned in Eatons?) Dr. Torrey thinks it is really the *Isopyrum thalictroides* Lin.,<sup>91</sup> a plant which inhabits the central portions of Europe, *Aethusa leptophylla*? is *Ergenia bulbosa* Nutt. As I am conscious now, of having committed some errors in labeling those plants which I left with Mr. French and others, I will thank you to submit to them the following corrections.

*Aletris aurea* is—*Veratrum luteum* Tor.  
*Aristolochia serspentaria*—*Polygonum scandens*.  
*Lycopus serratus*—*L. virginicus*.  
*Gerardia pedicularia*—*G. flava*, a variety of.  
*Cynoglossum pilosum*—*Rochelia virginiana*.  
*Pyrola dentata*—*Erigeron* (leaves) and *Pedicularis* (capsules).  
*Lobelia fulgens*—*Campanula americana*.  
*Lobelia kalmii*—*L. claytoniana*.  
*Kuhnia euratoraides*—*Eupatorium ageratoides*.  
*Eupatorium muskingi*—*Vernonia praealta*.  
*Cacalia radiata*—*C. reniformis*.  
*Helianthus sparsifolius*—*Heliopsis laevis*.  
*Coreopsis trichosperma*—*C. tinctoria*.  
*Actaea rubra*—*Macrotys racemosa*.  
*Thalictrum corynellum*—*T. revolutum*.  
*Cucubalus stellatus*—*Lysimachia quadrifolia*.  
*Cerastium vulgatum*—*Gnaphalium plantaginifolia*.

<sup>87-88</sup>T These two leave one in doubt as to what *Ranunculaceae* Riddell had in mind.

<sup>89</sup>Likely *Delphinium carolinianum*.

<sup>90</sup>*H. acutiloba* D. C.

<sup>91</sup>*Isopyrum biternatum* (Raf) T. & G.

*Potentilla fruticosa*—*Agrimonia parviflora*.

*Potentilla anserina*—*Agrimonia eupatoria*.

*Hedysarum humifusum*—*Clitoria mariana* Tor.

*Lespedeza divergens*—*Hedysarum strictum*.

*Lespedeza vidacea*—*H. paniculatum*.

*Melothria pendula*—*Lycopus angulata*.

*Urthica pumila* var. *nulcata*—*Boehmeria lateriflora*.<sup>92</sup>

Among the plants<sup>93</sup> I sent you by Dr. Cotton, the one labelled 'unknown shrub' is either *Cornus paniculata* or *Rhus aromatica*, the latter if it has ternate leaves. *Baptisia coerida* is *B. alba*. (I have not seen the flowers). *Oenothera new?* is *Gaura mollis*. 'Unknown thyme, is *Pycnanthemum virginianum*, *Elaeagnus argentea* is *Lepargyrea canadensis*.<sup>94</sup> *Lobelia dortmanna* is *L. Kalmii*. *Ribes* is *Ribes hirtellum*. Black haw is the *Viburnum prunifolium*. *Hypericum kalmianum* is *H. prolificum*.<sup>95</sup> *Euphorbia cordifolia*, is *Euphorbia obtusata*.

It is unfortunate that the Hildreth Herbarium, which would have included Riddell's plants mentioned in the *Western Republican*, was not cared for when it was given to Marietta College. Since the collection is not available, the list he published is the next best thing, for it not only gives us the earliest plant list for Ohio, but also furnishes some information as to the first introduced plants which had become established as weeds. It is not surprising that the insects reduced the Hildreth Collection to powder, for, at that time, the only interest in botany was the work of the geologist, E. B. Andrews. His collection was of a more durable nature because it contains many type specimens of fossil plants that he collected while working for the Ohio Geological Survey. Even some of these fossils were in a poor state of preservation. In the early 1920's Professor H. R. Eggleston found that Hildreth's insect collection had met a similar fate. A few years later Professor R. W. Whipple located Hildreth's clam collection and his journal listing minerals, insects, clams and curios in his collection. This journal did not list any plants other than a few fossils. Since Riddell worked for Hildreth a couple of summers as field geologist, and since he collected fossil plants and clams, it may be that some of his unlabeled fossil specimens got into the Andrews Collection, and that some of the clam shells in the Hildreth Collection were actually collected by Riddell.

Since Marietta College does not have a set of Kew Indices, the author was obliged to consult the late Dr. Fernald of the Gray Herbarium, Dr. Rogers McVaugh of the University of Michigan Herbarium, Dr. Clara Weishaupt of the Ohio State Herbarium, and Dr. Clarence Kohiski of the Arnold Arboretum in connection with the early nomenclature of several of the plants in question.

In spite of our conclusions, the reader is free to disagree, because there are no plants to substantiate Riddell's list. There will be some who will think that the list is worthless without specimens, but the author takes the attitude that even a newspaper list is better than nothing at all, especially when it was made by a reputable Botanist. For more detailed information concerning the life of Riddell, one should read Dr. Waller's (1945) most interesting papers from which I have drawn freely.

<sup>92</sup>*B. cylindrica* (L.) Sw.

<sup>93</sup>These may have been plants collected around Worthington, Ohio, rather than Marietta plants. Most of them do not appear in his original newspaper list, and note that they were sent to Marietta by Dr. Cotton. Several have not been recorded for Washington County.

<sup>94</sup>*Shepherdia canadensis* (L.) Nutt.

<sup>95</sup>*H. spathulatum* (Spach.) Stewd.

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